Amendment to the Claims

1. (Currently amended) An electrically variable optical attenuator comprising:

a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator; and

~~a~~ one or more sensors disposed relative to the pair of waveguides to sense ~~a~~ one or more variables that affect~~s~~ attenuation, and provide ~~a~~ one or more sensor outputs related to the one or more variables, wherein the variable sensed by the one or more sensors is at least one of temperature, wavelength, acceleration, or vibration.

2. (Currently amended) The attenuator of claim 1, wherein the ~~sensor is~~ one or more sensors comprise a temperature sensor.

3. (Original) The attenuator of claim 2, wherein the temperature sensor is disposed proximate at least one of the waveguides.

4. (Original) The attenuator of claim 2, wherein the temperature sensor is formed integral with the attenuator.

5. (Original) The attenuator of claim 4, wherein the temperature sensor is a variable capacitor.

6. (Original) The attenuator of claim 4, wherein the temperature sensor is a resistance temperature device.

7. (Original) The attenuator of claim 2, and further comprising a second sensor disposed to sense a second variable.

8. (Original) The attenuator of claim 7, wherein the second sensor is an input wavelength sensor.

9. (Currently amended) The attenuator of claim 1, wherein the ~~sensor is~~ one or more sensors comprise a wavelength sensor.

10. (Currently amended) The attenuator of claim 1, wherein the ~~sensor is~~ one or more sensors comprise an acceleration sensor.

11. (Currently amended) The attenuator of claim 1, wherein the ~~sensor is~~ one or more sensors comprise a vibration sensor.

12. (Currently amended) An electrically variable optical attenuator system comprising:

a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator;

a sensor disposed relative to the pair of waveguides to sense a variable that affects attenuation, and provide a sensor output related to the variable, wherein the variable sensed by the sensor is at least one of temperature, wavelength, acceleration, or vibration; and

a controller adapted to compensate an attenuation level based on the sensed variable.

13. (Original) The system of claim 12, wherein the sensor is a temperature sensor.

14. (Original) The system of claim 13, wherein the temperature sensor is disposed proximate at least one of the waveguides.

15. (Original) The system of claim 13, wherein the temperature sensor is formed integral with the attenuator.

16. (Original) The system of claim 15, wherein the temperature sensor is a variable capacitor.

17. (Original) The system of claim 15, wherein the temperature sensor is a resistance temperature device.

18. (Original) The system of claim 13, and further comprising a second sensor disposed to sense a second variable.

19. (Original) The system of claim 18, wherein the second sensor is an input wavelength sensor.

20. (Original) The system of claim 12, wherein the controller includes memory containing a look-up table relating the sensed variable to attenuation.

21. (Original) The system of claim 20, wherein the look-up table is multidimensional.

22. (Original) The system of claim 12, wherein the controller includes memory containing coefficients for a function relating the sensed variable to attenuation.

23. (Original) The system of claim 12, wherein the sensor is a wavelength sensor.

24. (Original) The system of claim 12, wherein the sensor is an acceleration sensor.

25. (Original) The system of claim 12, wherein the sensor is a vibration sensor.

26-36. (Canceled)

37. (Original) An electrically variable optical attenuator system comprising:

a pair of waveguides, each having a terminus, wherein at least one terminus is movable relative to the other terminus upon urging from an electrically driven actuator; and

a controller adapted to receive a value of an anticipated parameter, and to compensate an attenuation level based on the anticipated parameter.

38. (Original) The system of claim 37, wherein the anticipated parameter is an operating temperature of the system.

39. (Original) The system of claim 37, wherein the anticipated parameter is a wavelength of light to pass through the waveguides.